FIG. 1

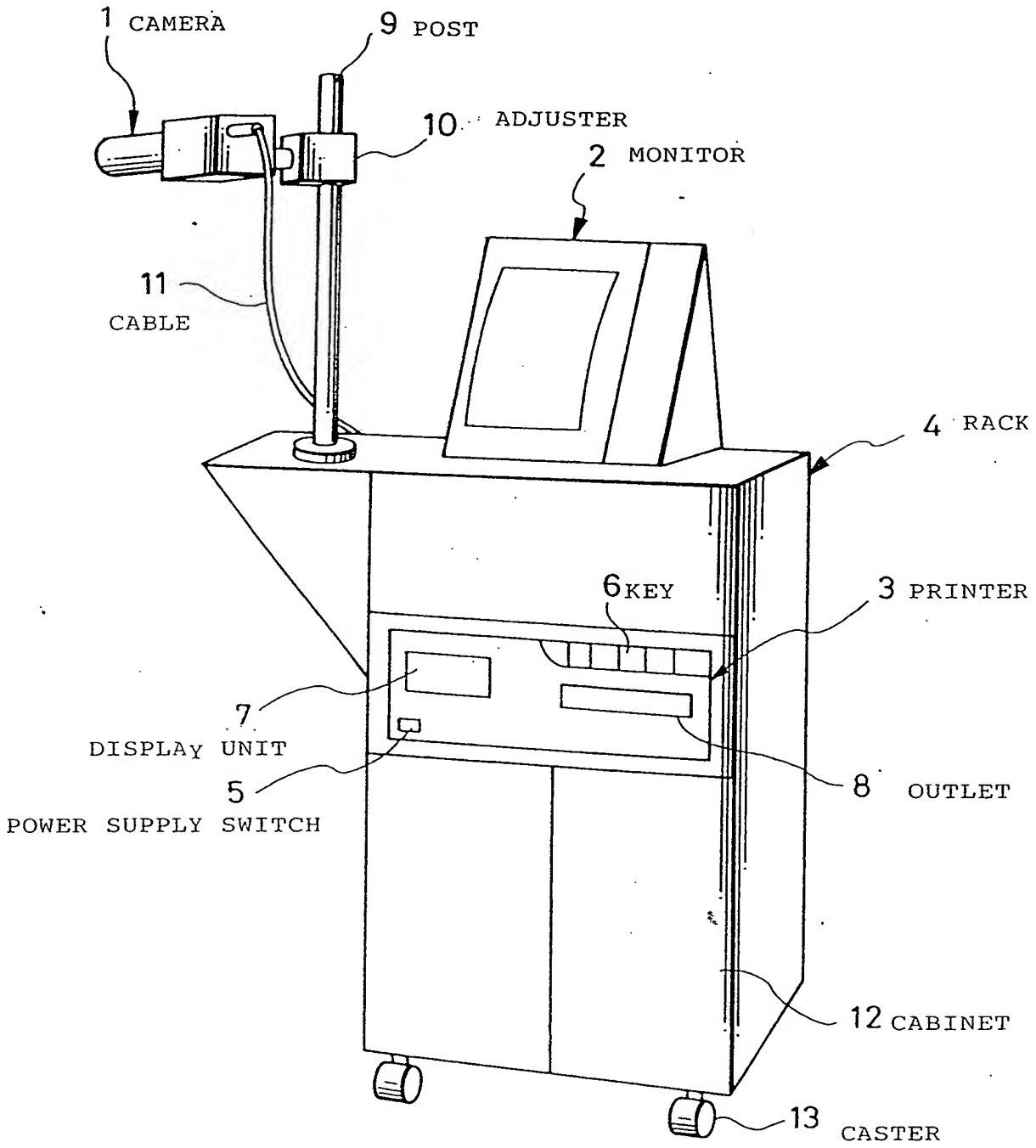

1 CAMERA
9 POST
10 ADJUSTER
2 MONITOR
11 CABLE
4 RACK
6 KEY
3 PRINTER
7 DISPLAY UNIT
5 POWER SUPPLY SWITCH
8 OUTLET
12 CABINET
13 CASTER

FIG. 2

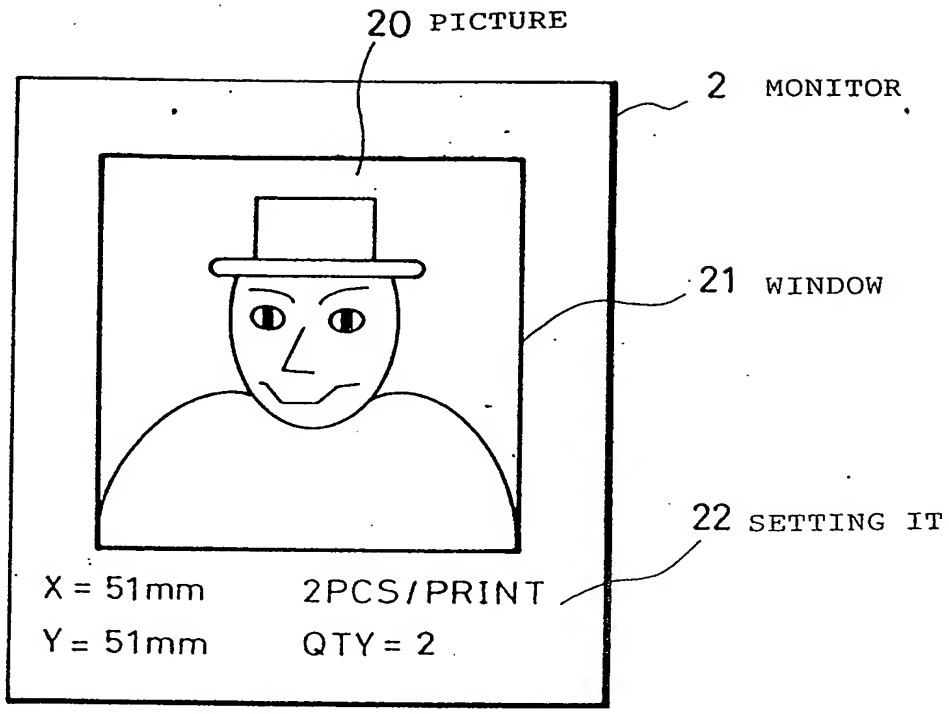
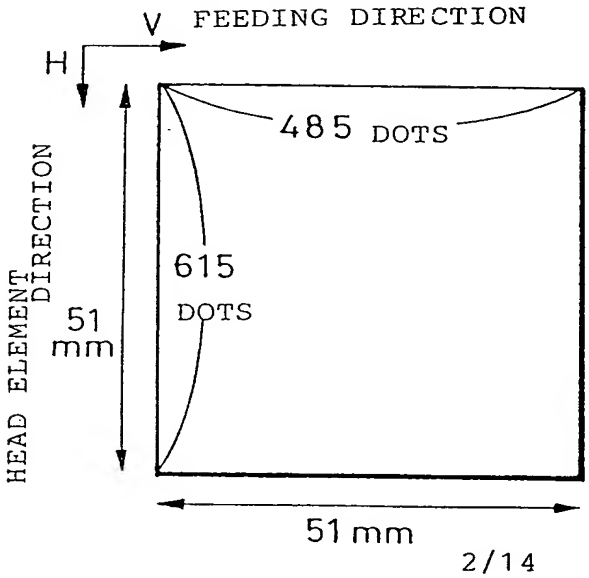


FIG. 4



NUMBER OF H-DIRECTION DOTS

51mm / 0.083 = 615 DOTS

MECHANICAL FEED PITCH IN V DIRECTION

51mm / 485 = 0.10515 mm

H-DIRECTION ACTIVE SCREEN AREA

52.655μsec × 3/4 = 39.5μsec

H-DIRECRION SAMPLING FREQUENCY

39.5μsec / 615 = 15.573070 MHz

FIG. 3

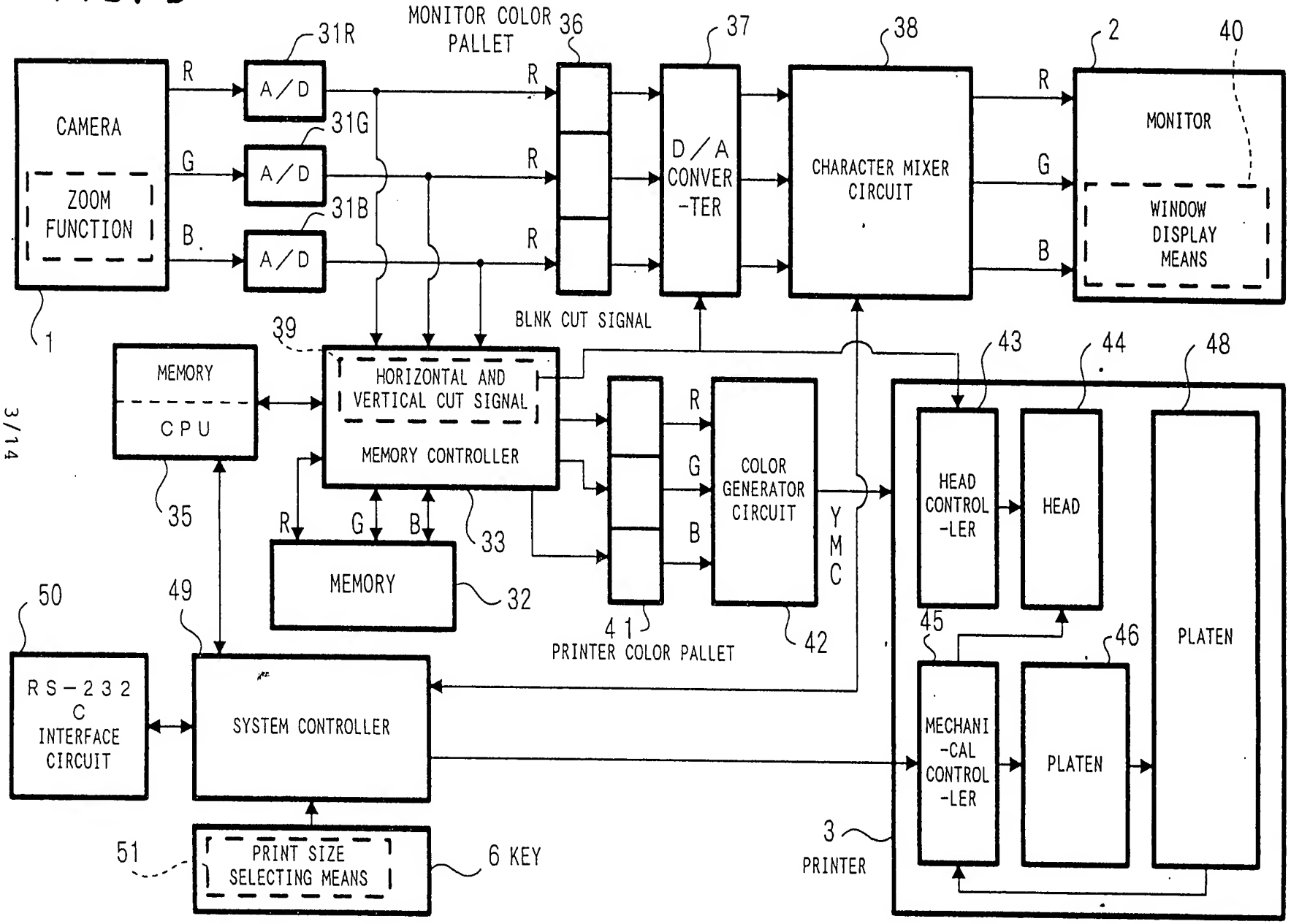

CAMERA
ZOOM FUNCTION
1
R
G
B
A/D
31R
31G
31B
MONITOR COLOR PALLET
36
37
D/A CONVER-TER
38
CHARACTER MIXER CIRCUIT
2
MONITOR
40
WINDOW DISPLAY MEANS
BLNK CUT SIGNAL
39
MEMORY
CPU
35
HORIZONTAL AND VERTICAL CUT SIGNAL
MEMORY CONTROLLER
33
MEMORY
32
41
PRINTER COLOR PALLET
COLOR GENERATOR CIRCUIT
42
Y
M
C
43
44
48
HEAD CONTROL-LER
HEAD
PLATEN
45
46
MECHANI-CAL CONTROL-LER
PLATEN
3
PRINTER
50
RS-232C INTERFACE CIRCUIT
49
SYSTEM CONTROLLER
51
PRINT SIZE SELECTING MEANS
6 KEY

FIG. 5

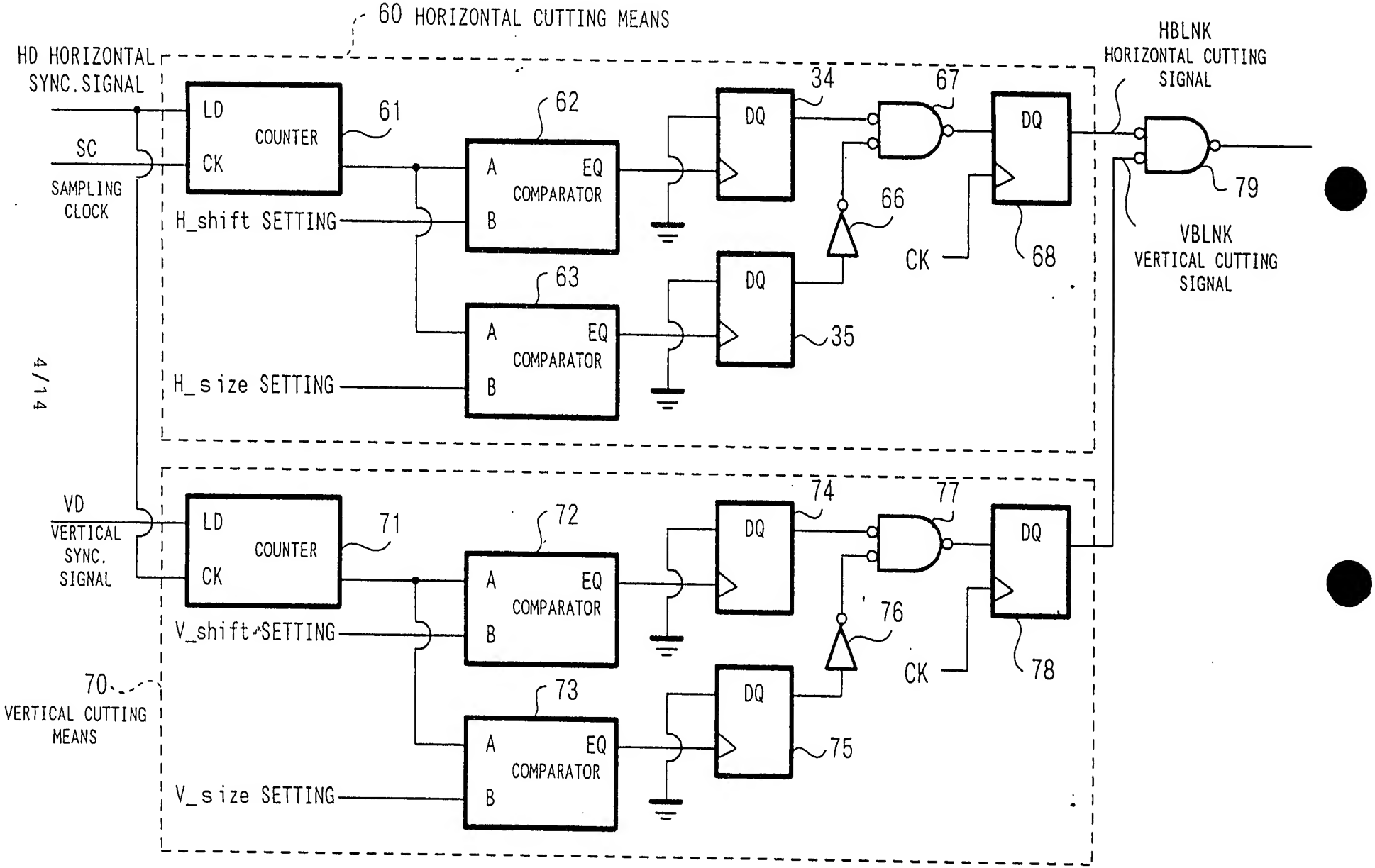

60 HORIZONTAL CUTTING MEANS
HD HORIZONTAL SYNC. SIGNAL
SC
SAMPLING CLOCK
LD
CK
COUNTER
61
H_shift SETTING
62
A
B
EQ
COMPARATOR
63
H_size SETTING
34
35
DQ
66
67
68
CK
HBLNK
HORIZONTAL CUTTING SIGNAL
79
VBLNK
VERTICAL CUTTING SIGNAL
VD
VERTICAL SYNC. SIGNAL
71
V_shift SETTING
72
73
V_size SETTING
74
75
76
77
78
70
VERTICAL CUTTING MEANS

FIG. 6A H D HORIZONTAL SYNC.SIGNAL

FIG. 6B S C SAMPLING CLOCK

FIG. 6C H-shift HORIZONTAL SHIFT SIGNAL

FIG. 6D H-size HORIZONTAL SIZE SIGNAL

FIG. 6E HBLNK HORIZONTAL CUT SIGNAL

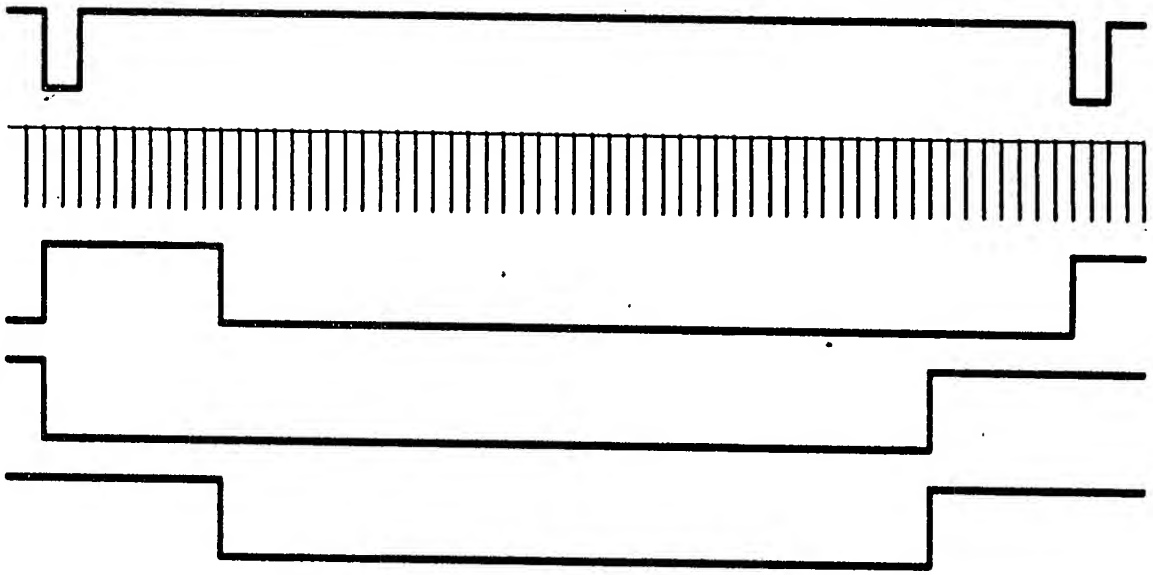


FIG. 7A V D VERTICAL SYNC. SIGNAL

FIG. 7B H D HORIZONTAL SYNC. SIGNAL

FIG. 7C V-shift VERTICAL SHIFT SIGNAL

FIG. 7D V-size VERTICAL SIZE SIGNAL

FIG. 7E VBLNK VERTICAL CUT SIGNAL

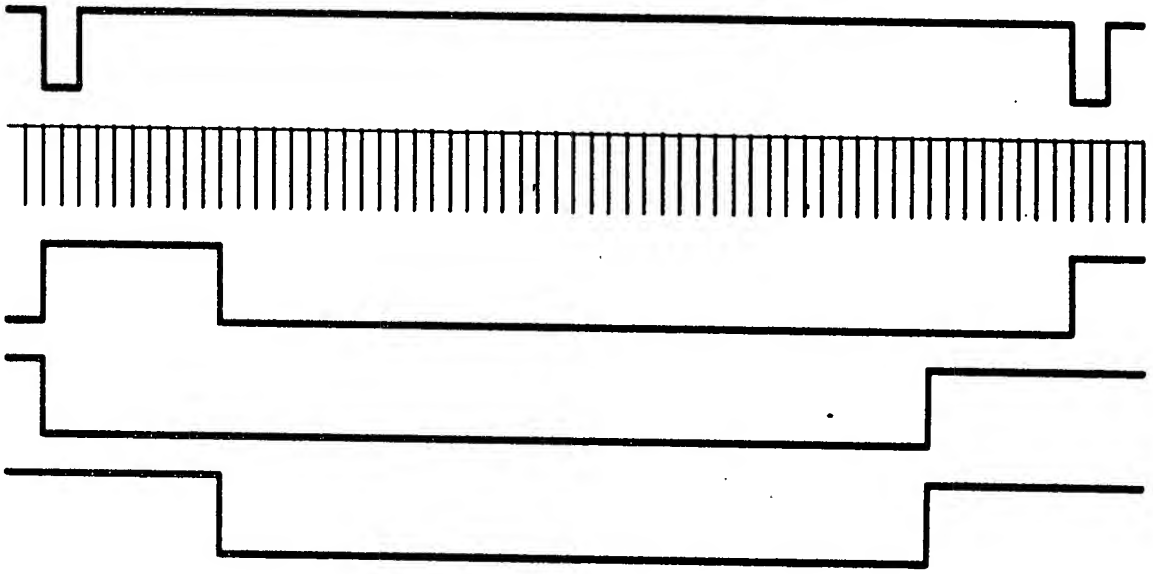


FIG. 8

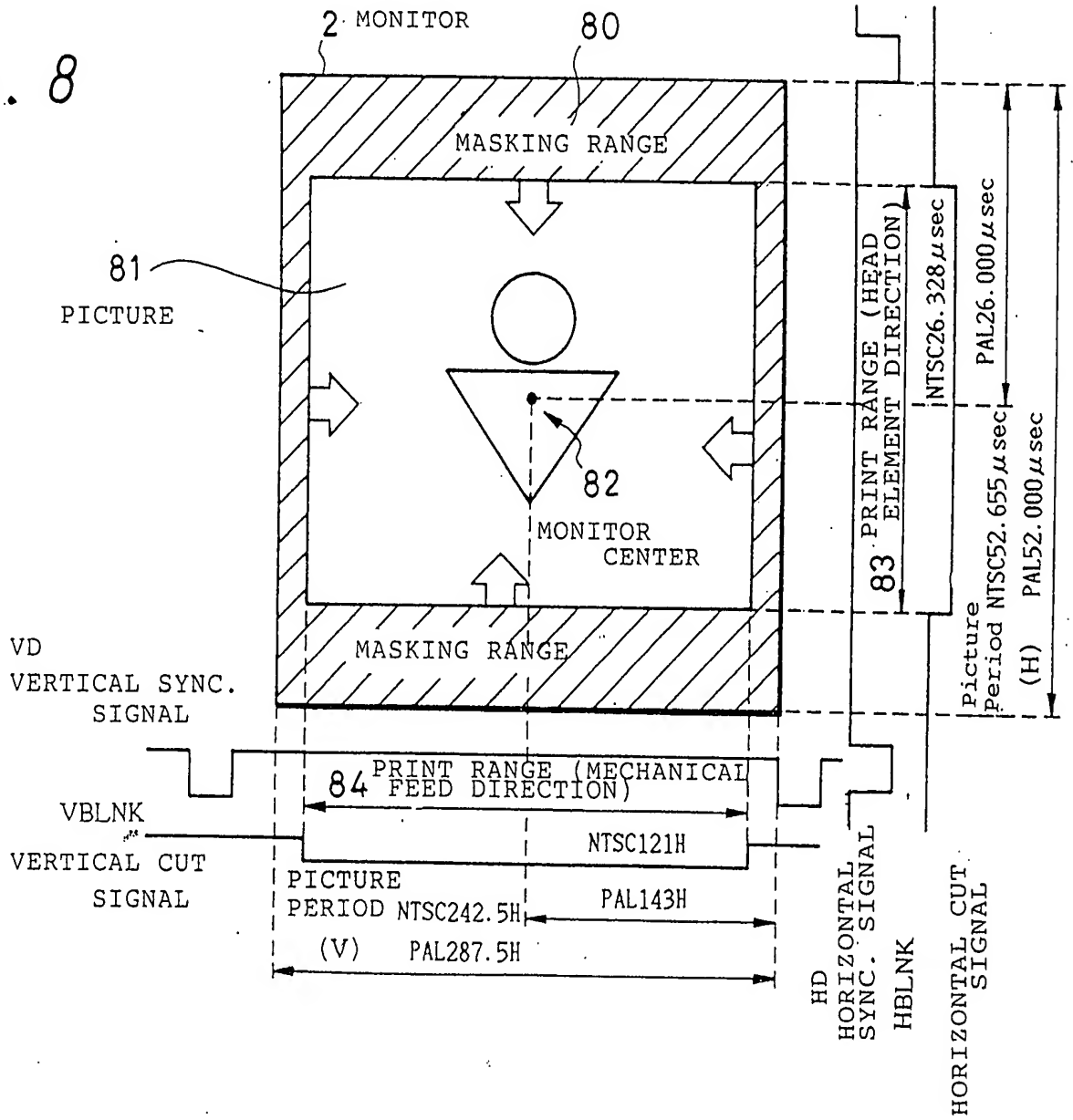

2 MONITOR
80
MASKING RANGE
81
PICTURE
82
MONITOR CENTER
MASKING RANGE
83 PRINT RANGE (HEAD ELEMENT DIRECTION)
NTSC26.328μsec
PAL26.000μsec
Picture Period NTSC52.655μsec
(H) PAL52.000μsec
VD VERTICAL SYNC. SIGNAL
84 PRINT RANGE (MECHANICAL FEED DIRECTION)
VBLNK
NTSC121H
VERTICAL CUT SIGNAL
PICTURE PERIOD NTSC242.5H
PAL143H
(V) PAL287.5H
HD HORIZONTAL SYNC. SIGNAL
HBLNK
HORIZONTAL CUT SIGNAL

FIG. 9

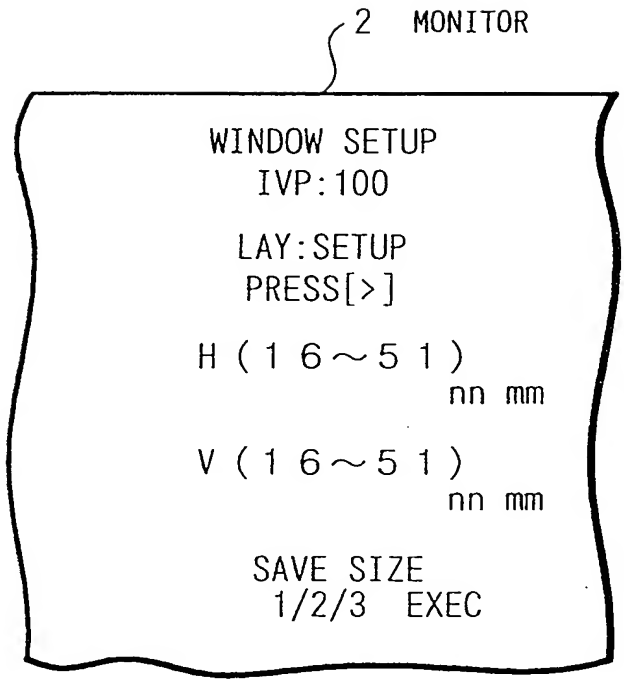

2 MONITOR
WINDOW SETUP
IVP:100
LAY:SETUP
PRESS[>]
H(16～51)
nn mm
V(16～51)
nn mm
SAVE SIZE
1/2/3 EXEC

FIG. 10

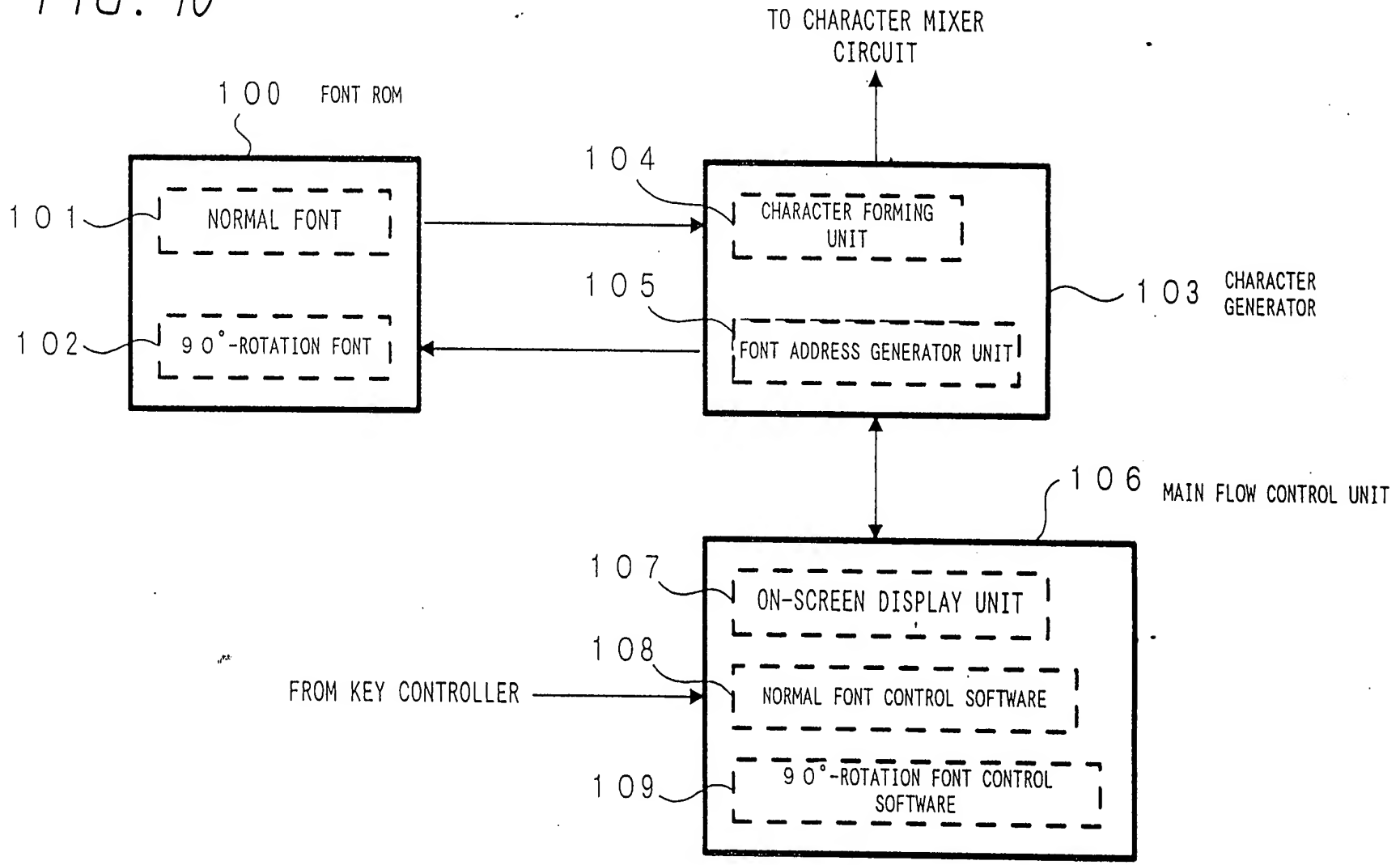

TO CHARACTER MIXER CIRCUIT
100 FONT ROM
101 NORMAL FONT
102 90°-ROTATION FONT
104 CHARACTER FORMING UNIT
105 FONT ADDRESS GENERATOR UNIT
103 CHARACTER GENERATOR
106 MAIN FLOW CONTROL UNIT
107 ON-SCREEN DISPLAY UNIT
108 NORMAL FONT CONTROL SOFTWARE
109 90°-ROTATION FONT CONTROL SOFTWARE
FROM KEY CONTROLLER

FIG. 11

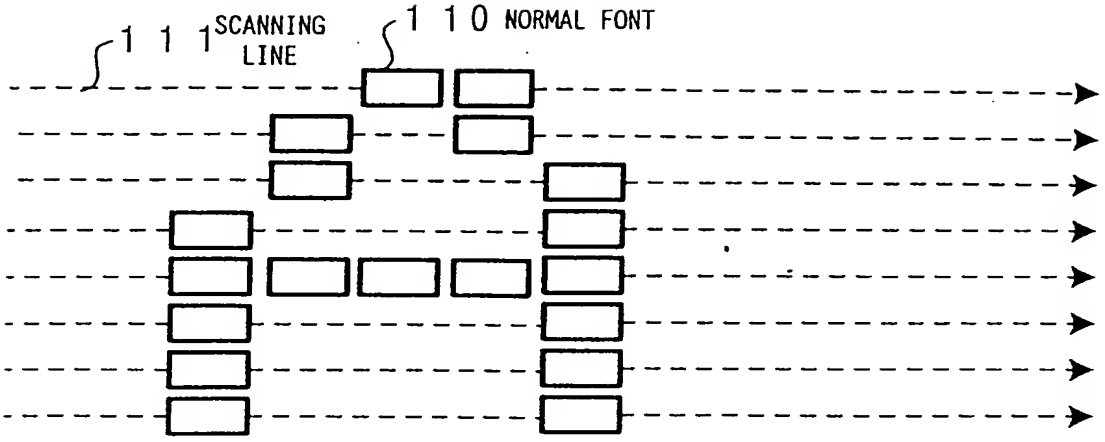

111 SCANNING LINE
110 NORMAL FONT

FIG. 12

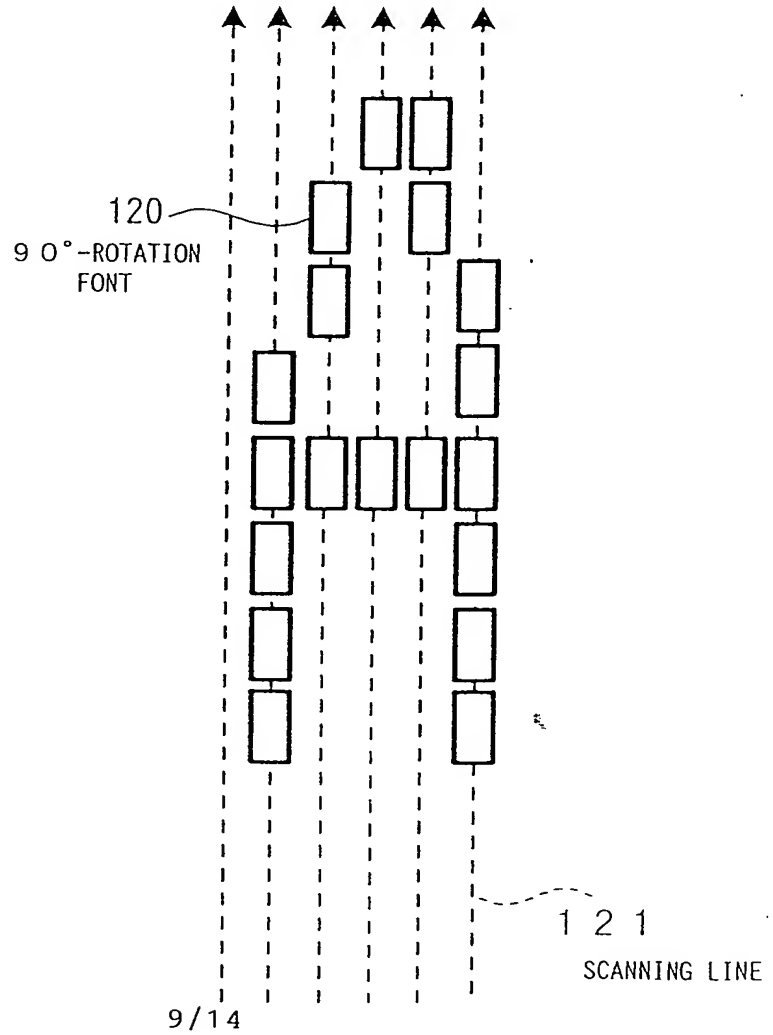

120
90°-ROTATION FONT
121
SCANNING LINE

FIG. 13A

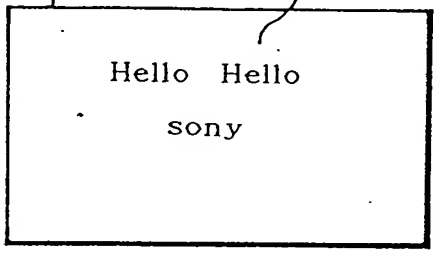


FIG. 13B

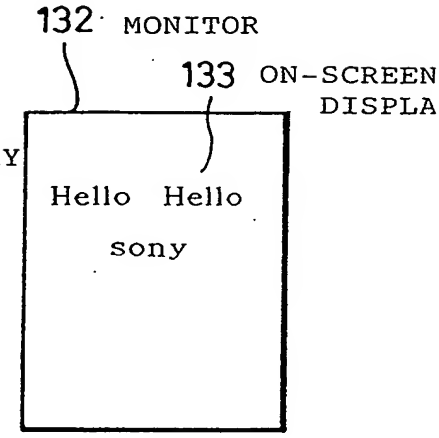


FIG. 14A

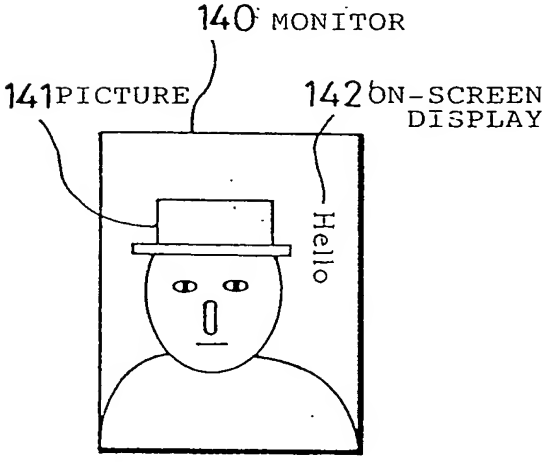
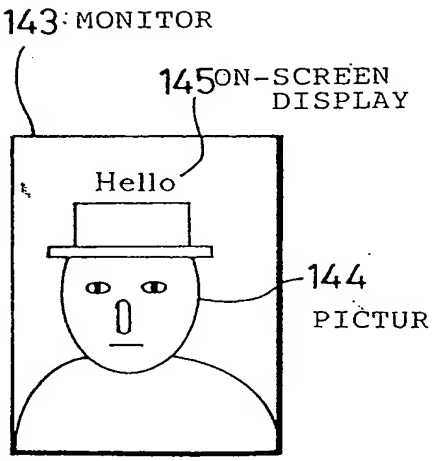


FIG. 14B



EXPLANATION OF REFERENCE NUMBERS

1	Camera
2	Monitor
3	Monitor
4	Rack
5	Power Supply Switch
6	Key
7	Display Unit
8	Outlet
9	Post
10	Adjuster
11	Cable
12	Cabinet
13	Caster
21	Window
20	Picture
22	Setting Item
30	Zooming Function
31R, 31G, 31B	A/D Converters
32	Memory
33	Memory Controller
34	CPU
35	Memory
36	Monitor Color Pallet
37	D/A Converter
38	Character Mixer Circuit
39	Horizontal and Vertical Cutting Means
40	Window Displaying Means

41 Printer Color Pallet

42 Color Generating Circuit

3 Printer

43 Head Controller

44 Head

45 Mechanical Controller

46 Platen Motor

48 Platen

49 System Controller

50 Interface Circuit

51 Print Size Selecting means

60 Horizontal Cutting Means

61 First Counter

62 First Comparator

63 Second Comparator

64 First Flip Flop

65 Second Flip Flop

66 Invertor

67 First Negative Logic NAND Circuit

68 Third Flip Flop

70 Vertical Cutting Means

71 Second Counter

72 Third Comparator

73 Fourth Comparator

74 Fourth Flip Flop

75 Fifth Flip Flop

76 Invertor

77 Negative Logic NAND Circuit

78 Sixth Flip Flop

EP 0 565 354 A2

79	Second Negative Logic NAND Circuit
80	Masking Range
81	Picture
82	Monitor Center
83	Print Range (Head Element Direction)
84	Print Range (Mechanical Feeding Direction)
100	FOnt ROM
101	Normal Font
102	90°-Rotation Font
103	Character Generator
104	Character Generator Unit
105	Font Address Generator Unit
106	Main Flow Control Unit
107	On-Screen Display Control Unit
108	Normal Font Control Software
109	90°-Rotation Font Control Software
110	Normal Font
111	Scanning Line
120	90°-Rotation Font
121	Scanning Line
130	Monitor
131	On-Screen Display
132	Monitor
133	On-Screen Display
140	Monitor
141	Picture
142	On-Screen Display
143	Monitor
144	Picture

EP0561542A2

145 On-Screen Display

E0000140-20050909